

31775

S/056/6*/021/006/021/054
B102/B135

24.6600

AUTHORS: Zaymidoroga, O. A., Kulyukin, M. M., Pontekorvo, B.,
Sulyayev, R. M., Filippov, A. I., Tsupko-Sitnikov, V. M.,
Sacherbakov, Yu. A.

TITLE: Observation of the reaction $\mu^- + \text{He}^3 \rightarrow \text{H}^3 + \nu$

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41,
no. 6(12), 1961, 1804-1808

TEXT: The probability of slow μ^- -meson capture by He^3 is known from highly accurate theoretical calculations. From probability measurements of the reaction $\mu^- + \text{He}^3 \rightarrow \text{H}^3 + \nu$ the muon-nucleon interaction constant can be determined and the results compared with those of the weak interaction theory. From the tritium energy in this process the upper limit of the neutral particle mass emitted in muon capture can be estimated and the probability of the process $\mu^- + p \rightarrow n + \nu$, not yet observed with certainty, can be determined. The first results of investigation of muon capture by He^3 are dealt with. A diffusion chamber filled with pure (99.999%) He^3 at
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B102/B138

20 atm, was placed in a field of 6000 oe and exposed to a muon beam (momentum 217 Mev/c) from the synchrocyclotron of the CERN. The methyl alcohol pressure in the sensitive layer of the chamber was less than 50 mm Hg, the tritium content of the gas used was 10^{-15} . A copper filter was put in the chamber to slow down the mesons and eliminate the pions. The chamber was carefully shielded from thermal neutrons. To date, about 6000 photographs have been taken of events where the muon path stopped at a He nucleus. The reactions sought were identified by the energy of the tritium nucleus. From the pion admixture 1200 stars were observed. The admixture was determined to $\sim 2\%$, causing $\pi^- + \text{He}^3 \rightarrow \text{H}^3 + \pi^-$ reactions. 14 events of the $\mu^- + \text{He}^3 \rightarrow \text{H}^3 + \nu$ reaction were identified, the mean tritium range was $2.37 \pm 0.02 \text{ mg/cm}^2$. The upper limit of the neutral particle emitted in muon capture was estimated: With 99% probability its mass is less than 6 Mev. The charged particle masses were: $m_{\text{He}^3} = 2608.22 \text{ Mev}$, $m_{\text{H}^3} = 1608.75 \text{ Mev}$, $m_{\mu} = 105.65 \text{ Mev}$. The probability of reaction (1) was $(1.30 \pm 0.40) \cdot 10^5 \text{ sec}^{-1}$. The value calculated by Wolfenstein on the basis of the theory of universal

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S/056/61/041/006/021/054
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Observation of the reaction ...

Weak interaction was $(1.54 \pm 0.08) \cdot 10^3 \text{ sec}^{-1}$. The constant of vectorial μE interaction was estimated roughly: with a probability of 90%.

$\left| \frac{\mu_v}{\mu_N} \right| / \left| \frac{\mu_A}{\mu_N} \right|$. The authors thank P. L. Kapitza, V. P. Resnikov, V. M. Kuznetsov and A. I. Filimonov for the purification of the He^3 from H^3 carried out in the IFP AN SSSR, S. S. Gershteyn for discussions, V. P. Dzhelepov, L. I. Lapidus for interest and G. M. Aleksandrov, V. V. Kuznetsov, N. V. Lebedev, V. I. Orekhov, V. F. Poyenko, A. G. Potekhin, D. B. Pontekorvo and I. V. Falomkin for experimental help. There are 2 figures and 12 references: 4 Soviet and 8 non-Soviet. The four most recent references to English-language publications read as follows: S. Weinberg, Phys. Rev. Lett. 4, 575, 1960; J. C. Fetkovich et al. Phys. Rev. 118, 319, 1960; E. J. Maier et al. Phys. Rev. Lett. 6, 417, 1961; L. Wolfenstein, Proc. of the 1960 Ann. Int. Conf. on High Energy Phys. of Rochester, Univ. of Rochester, 1960, p. 529; Bull. Amer. Phys. Soc., 6, 33, 1961.

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Observation of the reaction ...

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ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: July 25, 1961

Card 4/4

FALONKIN, I.V.; FILIPPOV, A.I.; KULYUKIN, M.M.; PONTECORVO, B.;
SHCHERBAKOV, Yu.A.; SMILYAYEV, R.M.; TSUPKO-SITNIKOV, V.M.;
ZATMIDOROGA, O.A.; SMIRNOVA, L.A. [translator]; SARANTSEVA,
V.R., tekhn. red.

Measurement of the $\mu^- + \text{He}^3 \rightarrow \text{H}^3 + \gamma$ reaction rate. Dubna,
Ob"edinenyyi in-t iadernykh issledovaniy, 1962. 7 p.
(No subject heading)

FALGOUTIN, I.V., FILIPPOV, A.I., KHEZUKIN, M.M., PONTI, M.VO, P.M., CHEREMASHIN, Yu.A.,
SULYAEV, R.M., TSUPKO-SITNIYEV, V.M., ZAKHAROVA, G.I.

"Muon-Nucleon Interaction Constants and Muon Capture in He^3 "

report presented at the Intl. Conference on High Energy Physics, Geneva,
4-11 July 1962

Joint Institute for Nuclear Research
Laboratory of Nuclear Problems

FILIPPOV, A.I., KULYUKIN, M.M., PONTECORVO, B.M., SHCHERBAKOV, Yu.A., SULYANOV, B.M.,
ZAKHAROVA, O.G.

"Observation of the Reaction $\mu + He^3 \rightarrow H^3 + \nu$ "

report presented at the Intl. Conference on High Energy Physics, Geneva,
4-11 July 1962

Joint Institute for Nuclear Research
Laboratory of Nuclear Problems

SECRET, H.A.
FALCHEN, I. V., FILIPPOV, A. I., KULYUKIN, M. M., Yu. A. [#]SHEINMANOV, SILEYAN, R. M.,
TRUFED-SITNIKOV, V.M., and ZAVALLOROGA, O. A.

" π^- -Meson Capture in He^3 "

report presented at Intl. Conference on High Energy Physics, Geneva,
4-11 July 1962

Joint Institute for Nuclear Research
Lab. of Nuclear Problems

24.6700

39680
S/056/62/043/001/055/056
B102/B104

AUTHORS:

Zaymidoroga, O. A., Kulyukin, M. M., Pontekorvo, B.,
Sulyayev, R. M., Falomkin, I. V., Filippov, A. I.,
Tsapko-Sitnikov, V. M., Shcherbakov, Yu. A.

TITLE:

Measurement of the probability of the $\mu^- + \text{He}^3 \rightarrow \text{H}^3 + \nu$ reaction

ABSTRACT:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 1(7), 1962, 355-358

TEXT: The $\mu^- + \text{He}^3 \rightarrow \text{H}^3 + \nu$ -reaction probability was measured in order to study the asymmetry of the muon and electron interactions with nucleons. The method used is that described in ZhETF, 41, 1805, 1961. A diffusion chamber filled with He^3 gas (20 atm) in a field of 6 koe was exposed to a muon beam (217 MeV/c) from the synchrocyclotron of the Laboratoriya yadernykh problem OIYAI (Laboratory of Nuclear Problems of the OIYAI), a copper filter being used to moderate the muons. Some 10^5 photographs were taken. The total number of captures and μ -e decay events was determined from the spectrum of the visible secondary tracks of tritium stars and also from the spectrum of the ranges of the stopped secondary particles.

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Measurement of the probability of the ...

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particles. The two spectra agree, each having two peaks: a higher peak at ranges of 2.0 - 2.6 mg/cm² corresponding to the reaction $\mu^- + \text{He}^3 \rightarrow \text{H}^3 + \nu$, and a smaller one at 5.3-5.9 mg/cm² corresponding to $\pi^- + \text{He}^3 \rightarrow \text{He}^3 + \nu$. The probability of the muon capture was found to be

$(\Lambda_{\text{He}^3})_{\text{exp}} = (1.36 \pm 0.18) \cdot 10^3 \text{ sec}^{-1}$, as against which Wolfenstein (Bull. Am. Phys. Soc. 6, 33, 1961) had calculated $(\Lambda_{\text{He}^3})_{\text{theor.}} = 1.54 \cdot 10^3 \text{ sec}^{-1}$ using

the theory of universal vectorial interaction. The result speaks in favor of this theory, and the muon - electron symmetry in nucleon interactions on which the universal theory is based agrees with the experiment (15% accuracy). An estimate of the Fermi and Gamow-Teller constants (G_F and G_T) of this reaction results in $G_F \sim 0.1$,

$G_T = -(0.8 \pm 0.4) G_F$ which is in agreement with the theory of universal V-A interaction. There are 2 figures.

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Measurement of the probability of the ... B/056/62/045/001/035/036
B102/B104

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy
(Joint Institute of Nuclear Research)

DATE: May 30, 1962

(END 3/3)

S/056/63/044/001/067/067
B102/B186

AUTHORS: Zaymidorega, O. A., Kulyukin, M. M., Pontekorvo, B.,
Sulyayev, R. M., Falonkin, I. V., Filippov, A. I.,
Tsapko-Sitnikov, V. M., Shcherbakov, Yu. A.

TITLE: Measurement of the $\mu^- + \text{He}^3 \rightarrow \text{He}^4 + \nu$ reaction probability.
Final results

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44,
no. 1, 1963, 389 - 390

TEXT: The $\mu^- + \text{He}^3$ reaction probability was determined from about 200 events
observed in a He^3 diffusion chamber. Experimental method, and the scanning
and evaluation. procedures used were the same as those described in ZhETF,
43, 355, 1962. The final experimental result is

$\Lambda_{\text{He}^3} = (1.41 \pm 0.14) \cdot 10^3 \text{ sec}^{-1}$. It agrees with the previously published
one which was calculated from the data of 90 events. There is 1 table.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy (Joint Institute
of Nuclear Research)
Card 3/2

SHCHERBAKOV, Yu. A.

S/056/63/044/004/011/014
B102/B186

AUTHORS: Zaymideroga, O. A., Kulyukin, N. M., Sulyayev, R. M.,
Folomkin, I. V., Filippov, A. I., Tsunka-Sitnikov, V. M.,
Shcherbakov, Yu. A.

TITLE: The Panofsky ratio for He^3 and the root-mean-square radius
for the $\text{He}^3 \rightarrow \text{H}^3$ transition

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44,
no. 4, 1963, 1180 - 1183

TEXT: The capture of π^- by He^3 was theoretically investigated, and was
effected in the following processes which are allowed from the standpoint
of conservation laws:

- I. $\pi^- + \text{He}^3 \rightarrow p + n + n$ (55.5%)
- II. $\pi^- + \text{He}^3 \rightarrow n + d$ (27.8%)
- III. $\pi^- + \text{He}^3 \rightarrow \text{H}^3 + n^0$ (9.4%)
- IV. $\pi^- + \text{He}^3 \rightarrow \text{H}^3 + \gamma$ (4.8%)
- V. $\pi^- + \text{He}^3 \rightarrow d + n + \gamma$ (2.0%)
- VI. $\pi^- + \text{He}^3 \rightarrow p + n + n + \gamma$ (0.5%)

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The Panofsky ratio for...

Now the capture of π^- mesons stopped in He^3 could be observed for the first time in the reactions III and IV. B. V. Struminskiy has shown (Preprint OIYAI, E-1012, Dubna, 1962), that the probability ratio (Panofsky ratio P) of these reactions is related with the r.m.s. radius r of the He^3 - π^- transition in radiative processes by

$$P = \frac{P_{\text{H}}}{1 - \frac{1}{2} \frac{\mu^2}{M^2} + \frac{1}{2} \frac{\mu^2}{M^2}} \frac{\omega + M}{\omega_H + M} \frac{E}{E_H} \left[\frac{E}{E_H} \frac{M(\mu + M)}{(\mu + M)} \right]^{1/2} \quad (1);$$

k is the wave number of the photon in IV, ω the photon energy in IV, m the neutron mass, μ the π^0 mass, M the tritium mass, E the energy released in III; the quantities with the subscript H refer to $\pi^- + p$ processes. The experiments were made with a He^3 -filled diffusion chamber (20 atm) placed in a magnetic field of 6 koe. Among the 2372 photographs of pion stops in He^3 the processes III and IV were singled out according to the ranges of the particles involved. The relative probabilities of III and IV were $W_3 = (13.5 \pm 0.9)\%$ and $W_4 = (6.2 \pm 0.7)\%$. The Panofsky ratio was obtained as: $P = 2.16 \pm 0.28$, and from this r could be calculated: $r = (1.24^{+0.30}_{-0.46}) \cdot 10^{-13} \text{ cm}$, which is in close agreement with the value calculated by C. Werntz (Nucl.

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The Panofsky ratio for...

S/056/63/044/004/011/Ch4
B102/3186

Phys. 16, 59, 1960). The yields of III and IV were found to be somewhat higher than those predicted by Messiah (Phys. Rev. 87, 639, 1952). There are 2 figures.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: November 16, 1962

Card 3/3

L 14307-63

ENP(q)/ENT(m)/BDS AFETC/ASD JD/JG

ACCESSION NR: AP3003110

S/0056/63/044/006/1852/1858

AUTHOR: Zaymidoroga, O. A.; Kulyukin, M. M.; Sulyeyev, R. M.; Filippov, A. I.;
Tsupko-Sitnikov, V. M.; Shcherbakov, Yu. A.

TITLE: Formation of helium mesic atoms in a hydrogen-helium gas mixture

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 1852-1858

TOPIC TAGS: helium mesic atom formation, helium, hydrogen, direct attachment, muon transfer

ABSTRACT: The formation of helium mesic atoms in a mixture of helium and hydrogen was studied in a diffusion cloud chamber at 19 atmospheres pressure. The experiment was performed to clarify the roles of the two possible mechanisms of helium mesic atom formation in a H-He mixture, direct attachment or via muon transfer, and as a check on an experimental procedure which permits the use of relatively small amounts of helium. The diffusion chamber was exposed to a beam of negative mesons with initial momentum 170 MeV/c from the synchrocyclotron of OIYaI. Both He sup 3 and He sup 4 were used, with nuclear concentrations 14.3 and 4.9 %, respectively. The probability of the capture of muons by helium from a hydrogen mesic atom in the ground state was found to be at least three orders of magnitude smaller than the probability of capture by carbon or oxygen nuclei,
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ACCESSION NR: AP3003110

and cannot appreciably exceed 1 million per second, in agreement with theoretical estimates made by S. S. Gershteyn (ZhETF v. 43, 706, 1962). Agreement with the Fermi-Teller "Z-law" was indicated for direct attachment of mesons to nuclei in the gas mixture. "The authors are deeply indebted to S. S. Gershteyn, P. F. Yermolov, and B. Pontecorvo for numerous valuable discussions, and to A. I. Tokarskaya and Ye. A. Shvaneva for assistance with the measurements." Orig. art. has: 2 figures, 10 formulas, and 4 tables.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 23Jan63

DATE ACQ: 23Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 003

OTHER: 009

Card 2/2

RAYMIR-HOGA, O.A.; KULYUKIN, M.M. PONTEBNOVO, B.; SOLYAYEV, R.M.;
PALOMKIN, I.V.; FILIPPOV, A.I.; TSUPKO-SITNIKOV, V.M.;
SHCHERBAKOV, Yu.A.

Measurement of the total probability of muon capture in He^3 .
Zhur. eksp. i teor. fiz. 45 no.6:1803-1807 D '63. (MIRA 17:2)

1. Ob'yedinennyy institut yadernykh issledovaniy.

ALLEN, G.M.; ZAYMIDROGA, O.A.; KULYUKIN, M.M.; PESHEKOV, V.P.;
SILVANO, R.M.; FILIPPOV, A.I.; TSUPKO-SITNIKOV, V.M.;
KABANOV, Yu.A.

Use of helium-3 for filling a high-pressure diffusion chamber.

Dokl. i tekhn. eksp. 9 no.1:69-75 Ja-F '64.

(MIRA 17:4)

1. Ob'yedinennyy institut yadernykh issledovaniy.

ARCHER-KOV, Yuri.

New data on the influence of ground water on the natural conditions of
growth in Khabarovsk. Vest. Mosk. un. Ser. 3. 1972. No. 1. P. 14-16.
1972. 14 p.

L 50447-65 EIT(m)/T/TMA(m)-2
ACCESSION NR: AF5012335

UR/0056/65/048/005/1267/1278

AUTHOR: Zayadova, O. A.; Kulyukin, M. M.; Sulyayev, B. M.; Yalozkin, I. Y.;
Filipov, A. I.; Tsupko-Bitnikov, V. M.; Shcherbakov, Yu. A.

TITLE: Study of pion capture by He^3 . I. Charge exchange and radiative capture.

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 5, 1965,
1267-1278

TOPIC TAGS: pion capture, helium, charge exchange, radiative capture, Panofsky
ratio, form factor, relative probability

ABSTRACT: This is a continuation of an earlier paper by the authors (ZhETF v. 44,
1180, 1965). A high-pressure diffusion chamber operating in a magnetic field was
used to measure the ratio of the probabilities of charge exchange and radiative
capture of pions by He^3 (the Panofsky ratio). The diffusion chamber was described
elsewhere (PTE No. 1, 69, 1964). The experimental apparatus and the measurements
are described in detail. The experimental values obtained for the Panofsky ratio
for He^3 , together with the calculations of B. V. Struminskiy (Preprint OIYaI,
E-1012; Proc. 1962 Intern. Conf. on High Energy Physics at CERN p. 17), is used to

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L 58047-65

ACCESSION NR: AP5013885

10
determine the nuclear form factor and the mean square nuclear radius corresponding to the distributions of the centers of the nucleons. The value of the Panofsky ratio is 2.28 ± 0.18 , that of the nuclear form factor is $F^2 = 0.75 \pm 0.06$ (for a momentum transfer $q^2 = 0.47 \text{ F}^{-2}$), and the relative probabilities of charge exchange and radiative capture are found to be $W(\text{H}^3\text{p}) = (15.8 \pm 0.8)\%$ and $W(\text{H}^3\gamma) = (6.9 \pm 0.5)\%$. "The authors thank B. Pontecorvo and B. V. Sturminskiy for a discussion of the results, and A. G. Zhukov, R. Ya. Lebedev, V. I. Orehov, V. F. Poyenko, A. G. Potekhin, A. I. Tokarskaya and Ye. A. Shvanava for assistance with the measurements and experiments." Orig. art. has: 6 figures, 10 formulas, and 5 tables.

ASSOCIATION: Ob"edinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 30Dec64

ENCL: 00

SUB CODE: NF

BR REF SOV: 003

OTHER: 004

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Card 2/2

ZAYMIDOROGA, O.A.; STRUMINSKIY, B.V.; SULTAYEV, R.M.; FALOMKIN, I.V.;
TSUPKO-SITNIKOV, V.M.; SHCHERBAKOV, Yu.A.

Nuclear form factors in muon capture by He^3 . Zhur. eksp. i teor.
fiz, 48 no.6:1594-1597 Je '65. (MIRA 18:7)

1. Ob"yedinennyy institut yadernykh issledovaniy.

L 64752-55 E.I.(a)/I/E.I.A(a)-2
ACCESSION NR: AP5016551

UR/0056/65/048/006/1594/1597

AUTHORS: Zaymidorova, O.A.; Struminskiy, B.V.; Sulyayev, R.M.;
Falomkin, I.V.; Tsupko-Sitnikov, V.M.; Shcherbakov, Yu.A.

TITLE: Nuclear form factors in muon capture by He-3

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48,
no. 6, 1965, 1594-1597

TOPIC TAGS: muon, helium, capture cross section

ABSTRACT: The authors obtained improved values of the nuclear matrix element for the reaction $\mu^- + \text{He}^3 \rightarrow \text{H}^3 + \nu$ from the experimental form factors obtained from the capture of pions by He^3 and from the scattering of electrons by He^3 and H^3 . The calculations are based on the expression given by Fujii and Primakoff for the matrix elements (Nuovo Cimento v. 12, 327, 1959). The partial probability for

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L 64752-65

ACCESSION NR: AP5016551

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the capture of muons by He^3 , calculated on the basis of the universal weak interaction theory with the values of the form factors obtained, is found to be $1515 \pm 55 \text{ sec}^{-1}$. This agrees well with the value $1490 \pm 40 \text{ sec}^{-1}$ obtained in earlier experiments by the authors (ZhETF v. 44, 389, 1963). The ratios of the pseudoscalar constants are calculated to be $g_A^\beta/g_V^\beta = -1.160$ and $g_P^\mu/g_A^\mu = 7$. From a comparison of the calculated probability with the experimental results the authors estimate the pseudoscalar constant to be $g_P^\mu = (8 \pm 3)g_A^\mu$.
"The authors thank S. M. Bilen'kiy, S. S. Gershteyn, and B. Pontecorvo for a discussion of the results." Orig. art. has: 1 figure and 3 formulas.

ASSOCIATION: Ob'yedinenyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

Card 2/3

L 64752-65

ACCESSION NR: AP5016551

SUBMITTED: 22Jan65

ENCL: 00

SUB CODE: NP

NR REF SOV: 003

OTHER: 011

llc
Card 3/3

SHCHERBAKOV, Yu. A.

Enzymatic composition of the intestinal chyme in connection with secretions from the small intestine and pancreas in conditions of high external temperature and insolation. Med. zhur. Uzb. no.6: 38-42 Je '62. (MIRA 15:7)

1. Iz kafedry normal'noy fiziologii (zav. - prof. G. F. Korot'ko) Andizhanskogo gosudarstvennogo meditsinskogo instituta.

(ENZYMES) (INTESTINES) (PANCREAS—SECRETIONS)
(TEMPERATURE—PHYSIOLOGICAL EFFECT)

SHCHERBAKOV, Yu.A.

Secretion of pancreatic enzymes in response to different food
stimuli under conditions of high environmental temperature. Vop.
pit. 21 no.3:61-66 My-Je '62. (MIRA 15:10)

1. Iz kafedry normal'noy fiziologii (zav. - prof. G.G.Korot'ko)
Andizhanskogo gosudarstvennogo meditsinskogo instituta.
(PANCREAS—SECRETIONS) (HEAT—PHYSIOLOGICAL EFFECT)

SHCHERBAKOV, Yu.A.

Method of studying the pancreatic secretion. Med.zhur.Uzb.
no.3:40-42 Mr '62. (MIRA 15:12)

1. Iz kafedry fiziologii (zav. - prof. G.F.Korot'ko)
Andizhanskogo gosudarstvennogo meditsinskogo instituta.
(PANCREAS--SECRETIONS)

NIKOLAYEV, A.V.; NIKOL'SKAYA, R.M.; SHCHERBAKOV, Yu.D.

Dioxane method of determining moisture in gypsum-bearing
and salinized soils. Pochvovedenie no.3:105-108 Mr '64.

(MIRA 17:4)

1. Nauchno-issledovatel'skiy institut pochvovedeniya, Dushanbe.

SHCHERBAKOV, Yu.F., inzhener.

Triode circuits for mixing pulses. Tekh.televid.no.5:34-43 '55.
(Pulse techniques (Electronics)) (MLRA 10:2)
(Triodes)

NIKONOV, V.A., inzh.; SHCHERBAKOV, Yu.G., inzh.

Device for machining central pivots. Mekh.stroi. 16 no.2:27-
28 F '59. (MIRA 12:2)

(Excavating machinery--Maintenance and repair) (Machine tools)

SHCHERBAKOV, Ya. G.: Master Geology-Mineralogy Sci (diss) -- "Conditions for gold content in the southwestern portion of the Kuznetsk Ala-Tau". Stalinsk-Tomsk, 1955. 21 pp (Tomsk Order of Labor Red Banner Polytech Inst in S. K. Kirov), 100 copies (RI, No 12, 1959, 102)

SECHERBAKOV, Yu.G.

Gold placers in the southwestern slope of the Kuznetsk Ala-Tau.
Izv. TPI 90:100-111 '58. (MIRA 12:2)

1. Predstavleno professorom doktorom F.N. Shakhovym.
(Kuznetsk Ala-Tau--Gold ores)

CHCHERBAKOV, Yu.G.

Characteristics of gold placer deposits in Transylvania. Geol.
i geofiz. no.6:134-138 '60. (MIRA 13:9)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.
(Transylvania--Gold ores)

SHCHENBAKOV, Yu.G.

Characteristics of the formation of gold ores in the northeastern
Altai and adjacent areas of the Kuznetsk Ala-Tau. Geol. i geofiz.
no. 12:3-12 '60. (MIRA 14:5)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

(Altai Mountain region--Gold ores)

SHCHERBAKOV, Yu.G.

Some characteristics of gold mineralization in the Sinyukha deposit.
Geol. i geofiz. no.2:16-30 '61. (MIRA 14:5)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,
Novosibirsk. (Altai Mountains--Gold ores)

SHCHENBAKOV, Yu.G.

Interdepartmental conference on the metallogeny of gold in Western
Siberia and Krasnoyarsk Territory. Geol. i geofiz. no.2:130-131
'61. (MIRA 14:5)

(Siberia—Gold ores)

SHCHERBAKOV, Yu.G.

Recent data on the geology of Gornaya Shoriya. Geol. i geofiz.
no.6:61-73 '61. (MIRA 14:7)

1. Institut gelologii i geofiziki Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

(Gornaya Shoriya--Geology)

SHCHERRAKOV, Yu.G.

Study of the genesis of ore shoots in Siberian and Far Eastern
deposits. Geol. i geofiz. no.8:129-131 '62. (MIRA 15:10)
(Siberia, Eastern—Ore deposits)

SHCHERBAKOV, Yu.G.

Paragenetic associations and ionic densities of elements in ore deposits. Geokhimiya no.7:702-707 J1 '63. (MIRA 16:9)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

(Paragenesis) (Ions--Density) (Ore deposits)

DMITRIYEV, A.N.; ZYKOV, S.I.; KLYAROVSKIY, V.M.; SHCHERBAKOV, Yu.G.

New data on Mesozoic igneous activity and mineralization
in the Gornyy Altai and the Kuznetsk Alatau. Dokl. AN SSSR
153 no.4:903-905 D '63. (MIRA 17:1)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN
SSSR. Predstavleno akademikom V.S. Sobolevym.

SHCHERBAKOV, Yu.G.; PEREZHOGIN, G.A.

Geochemistry of gold. Geokhimiya no.6:518-528 Je '64. (MIRA 18:7)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk i Institut geokhimii i analiticheskoy khimii imeni Vernadskogo AN SSSR, Moskva.

SHCHERBAKOV, Yu. G.

Correlative dependence of ore complexes associated with granitoids
on the composition of the formations enclosing them. Dokl. AN
SSSR 156 no. 2:359-362 My '64. (MIRA 17:7)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN
SSSR. Predstavleno akademikom V.S. Sobolevym.

SHCHERBAKOV, Yu.C.

Periodicity of the Clarke ratio and geochemical development of
the earth's crust. Dokl. AN SSSR 161 no.2:452-454. Mr '65.

(MIRA 18:4)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.
Submitted June 22, 1964.

SHCH 1: 10, 11, 12.

Geological classification of elements. Dokl. AN SSSR 164 no.4:917-
(1964) 1964. (MIRA 18:10)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.
Submitted December 22, 1964.

SHCHERBAKOV, Yu.M.

Certain data on the factual recovery factors for the October
field. Neft. khoz. 41 no.7:39-43 J1'63 (MIRA 17:7)

SHCHERBAKOV, Yu.M.; BONDARENKO, L.A.

Hydrosounding wells. Nefteprom.delo no.11:35-39 '63. (MIRA 17:3)

1. Neftepromyslovoye upravleniye "Okt'yabr'nefti".

U S S R .

✓9907* Treatment of Flax Seed With Copper Sulfate. Obo-
boika semlag l'na mednym kuporosom. (Russian.) N. A.
Drozdov and Iur. N. Shcherbakov, Zemledelie, v. 3, no. 4, Apr.
1955, p. 46-47.
Results in terms of fiber length and yield.

DYACHENKO, M., inzh.; SHCHERBAKOVA, A., inzh.

Automatic tire pumping. Avt.transp. 40 no.5:27-28 My '62.
(MIRA 15:5)

1. Donetskiiy avtotrest.
(Tires, Rubber) (Air pumps)

J. GILBERT, A. A.

"The Topography of the Nervous System and the Role of the
Brain Stem." *Brain* 1951, 74:1-10. (Brain, 1951, No 1, Sep 54)

SC: 30.432, 20 Apr 55

SHCHERBAKOVA, A.A.

Some characteristics of the distribution of arteries and nerves
in the human foot. Arkh. anat. gist. i embr. 32 no.3:89-92 J1-S
'55 (MLRA 9:5)

1. Iz kafedry normal'noy anatomii Rostovskogo meditsinskogo instituta
(sav.-prof. P.A. Sokolov)
(FOOT, blood supply,
arteries)
(FOOT, innervation)

ОБЩЕЕ ПОЗНАНИЕ, А. А.

Botany

A. N. Beketov, the outstanding Russian botanist-evolutionist, Izv. AN SSSR. Ser. biol., No. 6, 1951

9. Monthly List of Russian Accessions, Library of Congress, March 195~~8~~⁶, Uncl.
2

WASH. POST, 1952, 311. (The Washington Post, 1952, 311. 49)

SHCHERBAKOVA, A.A.

Works and world outlook of A.N.Beketov. Trudy Inst.ist.est. 5:211-244
'53. (MIRA 6:?)

(Beketov, Andrei Nikolaevich, 1825-1902)

SHCHERBAKOVA, A.A.

Mikhail Maksimovich as a naturalist and botanist. Izv. AN SSSR.
Ser.biol. no.4:76-96 J1-Ag '54. (MLBA 7:10)

1. Institut istoriiyestestvoznaniya i tekhniki Akademii nauk
SSSR.

(Maksimovich, Mikhail Aleksandrovich, 1804-1873)

~~SHCHERBAKOVA, A.A.~~

SHCHERBAKOVA, A.A.

~~SHCHERBAKOVA, A.A.~~
Oldest Bulgarian botanist, Academician Stefan Petkov. Izv. AN SSSR.
Ser. biol. no.6:104-116 N-D '54. (MLRA 8:3)

1. Institut istorii yestestvoznaniya i tekhniki Akademii nauk SSSR.
(PETKOV, STEFAN, 1866-1951)

SHCHERBAKOVA, A.A.

Discovery of correlations of above ground organs of higher plants.
Biul.Glav.bot.sada no.19:140-144 '54. (MLRA 8:2)

1. Institut istorii yestestvoznaniya i tekhniki Akademii nauk SSSR.
(Botany--Anatomy)

SHCHERBAKOVA, A.A.

Scientific and pedagogical activity of L.M.Krechetovich.
Bot.zhur. 39 no.1:150-156 Ja-F '54. (MLRA 7:3)

1. Institut istoriiyestestvoznaniya i tekhniki Akademii nauk SSSR,
Moskva. (Krechetovich, Lev Melkhisedekovich, 1878-)

SHCHERBAKOVA, A. A.

USSR/Scientists Botany

Card : 1/1

Authors : Shcherbakova, A. A.

Title : At the sources of the cell theory (Article commemorating the 150th anniversary of the birth of M. J. Schleiden)

Periodical : Priroda, 43/7, 45 - 52, July 1954

Abstract : In recounting the outstanding features of the scientific work of Schleiden, a botanist born in Hamburg, the contributions to biological knowledge by other scientists are mentioned. The article is biographical and historical rather than scientific.

Institution :

Submitted :

SHCHERBAKOVA, A.A.

V.I. Beliaev, a classic figure in botany. Izv. AN SSSR. Ser. biol.
no.6:109-126 N-D '55 (MLRA 9:3)

2. Institut istorii estestvoznaniya i tekhniki Akademii nauk SSSR.
(BELIAEV, VLADIMIR IVANOVICH, 1855-1911)

SHCHERBAKOVA, A.A.

Dissertations of Soviet botanists for the period of 1944-1953.
Bot.zhur. 40 no.2:256-280 Mar-Apr '55. (MIRA 8:7)

1. Institut istorii yestestvoznaniya i tekhniki Akademii nauk
SSSR, Moscow. (Bibliography--Botany)

SHCHERBAKOVA, A.A.

Dissertation of Soviet botanists for the period 1944-1953
Bot.zhur. 40 no.6:867-910 N-D '55. (MLRA 9:4)

1. Institut istorii yestestvoznaniya i tekhniki Akademii
nauk SSSR, Moskva.
(Bibliography--Botany)

SHCHERBAKOVA, A.A.

Strange omission. Bot.zhur.41 no.2:288-289 F '56. (MIRA 9:7)

1.Institut istorii estestvoznaniya i tekhniki Akademii nauk SSSR,
Moskva. (Kharkev--Botanists)

SMYCHERBAKOVA, A.A.

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Dissertations of Soviet botanists defended in 1954-1954. Bot.zhur.
41 no.10:1532-1554 O '56. (MLRA 10:1)

1. Institut istorii estestvoznaniya i tekhniki Akademii nauk SSSR.
Moskva.

(Bibliography--Botany)

SHCHERBAKOVA, A.A.

Evaluating P.F. Gorianinov's contribution to the development of the cell theory. Trudy Inst. ist. est. i tekhn. 14:98-113 '57.

(Cells) (Gorianinov, Pavel Fedorovich, 1796-1865) (MIRA 11:4)

SHCHERBAKOVA, A.A.

Two theses that should have been rejected. Bot. zhur. 42 no. 1: 110-113
JA '57. (MLRA 10:2)

1. Institut istorii yestestvoznaniya i tekhniki Akademii nauk SSSR,
Moskva.
(Biology--Philosophy) (Microbiology) (Cells)

SHCHERBAKOVA, A.A.

Errors in the published biographies of N.H. Kaufman and K.A. Timiria-
zev. Bot. zhur. 42 no.5:813-814 My '57. (MLRA 10:6)

1. Institut istorii yestestvoznaniya i tekhniki Akademii nauk SSSR,
Moskva.

(Kaufman, Nikolai Nikolaevich, 1834-1970)
(Timiriachev, Kliment Arkad'evich, 1843-1920)

SHCHERBAKOVA, A.A.; KUDRYASHOV, L.V., otvetstvennyy red.; ANTONYUK, L.D.,
red.izd-va; NOVICHKOVA, N.D., tekhn.red.

[Andrei Nikolaevich Beketov, on outstanding Russian botanist and
public figure] Andrei Nikolaevich Beketov - vydaiushchiisia russkii
botanik i obshchestvennyi deiatel'. Moskva, Izd-vo Akad.nauk SSSR,
1958. 254 p. (MIRA 11:7)
(Beketov, Andrei Nikolaevich, 1825-1902)

SHCHERBAKOVA, A.A., kand. biol. nauk, otvetstvennyy red.; TSITSIN, N.V.,
akademik; red.; SUKACHEV, V.N., akademik, red.; BAZILEVSKAYA,
N.A., prof., red.; MEYER, K.I., prof., red.; BLYAKHER, L.Ya.,
prof., red.; ANTONYUK, L.D., red. izd-va; MARKOVICH, S.G., tekhn.
red.

[Carl Linnaeus; a collection of articles] Karl Linnei; sbornik
statei. Moskva, 1958. 257 p. (MIRA 11:9)

1. Akademiya nauk SSSR. Institut istorii estestvoznaniya i
tekhniki.

(Linne, Carl von, 1707-1778)

59. 218044. 1. 1. 1.

AUTHOR: Lebedev, D.V. (Leningrad) SOV-26-58-9-35/42

TITLE: A Book on Botanists of Our Native Country (Kniga o botanikakh nashey rodiny)

PERIODICAL: Priroda, 1958, Nr 9, pp 119-120 (USSR)

ABSTRACT: Review of the book "Vydayushchiyesya Otechestvennyye Botaniki" (Eminent Botanists of the Fatherland), Uchpedgiz Publishing House 1957, 443 pp, by Bazilyevskaya, N.A., Meyer, K.I., Stankov, S.S. and Shcherbakova, A.A.

2. Botanists --USSR

Card 1/1

SOV-26-58-11-11/49

AUTHOR: Shcherbakova, A.A., Candidate of Biological Sciences

TITLE: A Great English Botanist (Velikiy angliyskiy botanik). The 100th Anniversary of the Death of Robert Brown (K stoletiyu so dnya smerti Roberta Browna).

PERIODICAL: Priroda, 1958, Nr 11, pp 64 - 67 (USSR)

ABSTRACT: The article sketches the life and scientific achievements of Robert Brown. There is 1 photograph.

ASSOCIATION: Institut istorii yestestvoznaniya i tekhniki AN SSSR/
Moskva (The Institute of the History of Natural Science and Engineering of the AS USSR /Moscow)

1. Botanists--Gt Brit.

2. Brown, R.

Card 1/1

SHCHERBAKOVA, A.A., kand.biol.nauk

Vladimir Ivanovich Beliaev, a classical figure in botany. Trudy
Inst. ist. est. i tekhn. 24:32-84 '58. (MIRA 11:8)
(Beliaev, Vladimir Ivanovich, 1855-1911)
(Botany)

SUCHOMERLOVA, A.A.,

N.N.Kaufman as a scientist notable for his work in plant morphology and flower studies. Trudy Inst.ist.est.i tekhn. 23:289-323
1959. (MIRA 12:10)

(Kaufman, Nikolai Nikolaevich, 1834-1870)

SHCHERBAKOVA, A.A.

History of Russian botanical (morphological) terminology. Trudy
Inst.ist.est.i tekhn. 32:203-250 '60. (MIRA 13:10)
(Botany—Terminology)

SHCHERBAKOVA, A.A.

Sources of Michurin's theories; A.T. Bolotov as I.V. Michurin's predecessor. Bot.zhur. 45 no.7:1082-1085 JI '60. (MIRA 13:7)

1. Institut istorii yestestvoznaniya i tekhniki Akademii Nauk SSSR, Moskva.

(Bolotov, Andrei Timofeevich, 1735-1883)
(Fruit culture)

SHCHERBAKOVA, Antonina Alekseyevna; PROZINA, M.N., otv. red. [deceased];
VOVCHENKO, M.L., red. izd-va; VOLKOVA, V.Ye., tekhn. red.

[History of plant cytology in Russia during the 19th century]
Istoriia tsitologii rastenii v Rossii v XIX veke. Moskva, Izd-
vo Akad. nauk SSSR, 1961. 186 p. (MIRA 14:11)
(Plant cells and tissues)

SPONERBAKOVA, A.A.

Development of botanical knowledge in Russia before the 18th
century. Trudy Inst. ist. est. i tekhn. 36:136-175 '69.
(MIRA 14:9)

(Botany)

SHCHERBAKOVA, A.A., kand.biologicheskikh nauk

Sakhalin buckwheat. Nauka i zhizn' 28 no.3:46-47 Mr '61.

(MIRA 14:3)

(Buckwheat)

SHCHERBAKOVA, A.A. (Moskva)

Origin of the term "griby" (fungi); from history of the Russian
terminology. Bot.zhur. 47 no.3:440-441 Mr '62. (MIRA 15:3)
(Botany--Nomenclature) (Fungi)

UDK 547.7.01.02

UDK / Chemistry - Organosilicon Compounds

21 Sep 82

"Hexamethyl and Hexaethyl Derivatives of Disilamethane and Disilaneethane," and
A. I. Topchiyev, N. E. Kuznetsov, and A. I. Shcherbakova

UDK 547.7.01.02, No 3, pp 355-360

Hexamethyl and hexaethyl derivatives of disilamethane and disilaneethane were prepared by treating hexachlorodisilamethane and hexachlorodisilaneethane with Grignard reagents or Li-organic compounds. The following were prepared: hexamethyldisilamethane, hexaethyltrisilaneethane, hexamethyldisilaneethane, and hexaethyldisilaneethane.

UDK 547.7.01.02

(CA 47 no. 22:12113 '53)

SHCHERBAKOVA, A. A.

SHCHERBAKOVA, A. A.: "The diffusion of hydrogen through iron and binary ferrochrome and ferronickel alloys at high pressures and temperatures". Leningrad, 1954. Leningrad State Order of Lenin University A. A. Zhdanov. (Dissertation for the Degree of candidate of Science of Chemical sciences)

SO: Knishyava Letopis', No. 41, 3 Oct 55

SHICHERBAKOVA/A

E-6

Category : USSR/Solid State Physics - Diffusion. Sintering

Abs Jour : Ref Zhur - Fizika, No 2, 1957 No 3891

Author : Shicherbakova, A.A.

Title : Diffusion of Hydrogen Through Iron and Binary Iron-Chrome and Iron-Nickel Alloys at High Pressures and Temperatures.

Orig Pub : Zh. prikl. khimii, 1956, 29, No 6, 879-884

Abstract : It was established that the speed of diffusion of hydrogen through binary alloys Fe-Cr (0.97 -- 0.41% Cr) and Fe-Ni alloys (1.29 -- 98.84% Ni) at a pressure of 100 atmos and a temperature from 200 to 600° is described by the equation $v = K \exp(-E/RT)$. The speed of diffusion of hydrogen through the binary Fe-Cr alloys at a pressure of 100 atmos and a temperature from 200 to 600° diminishes considerably when the chromium content in the iron is increased to 19%. The speed of diffusion of hydrogen through the Fe-Ni alloys under the same experimental conditions increases noticeably with addition of Ni from 1.29 to 10%, but further increase of Ni in the alloy from 10 to 20% causes a considerable reduction in the speed of diffusion of hydrogen.

Cards : 1/1

SACHERBAKOVA, A. A.

18 27 27
Diffusion of hydrogen through iron and through the binary
alloys of iron-chromium and iron-nickel at high pressures
and temperatures. A. A. Shcherbakova. J. Appl. Chem.
U.S.S.R. 29, 955-60(1956) (English translation).—See C.A.
50, 16234e. B. M. R.

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USSR/Physical Chemistry - Crystals, B-5

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 207

Author: Shcherbakova, A. A.

Institution: None

Title: Diffusion of Hydrogen in Iron and Binary Fe-Cr and Fe-Ni Alloys at High Temperatures and Pressures

Original

Periodical: Zh. prikl. khimii, 1956, Vol 29, No 6, 879-884

Abstract: It has been found that the rate of diffusion of H_2 through strips of Fe-Cr (0.57-41% Cr) and Fe-Ni (1.29-98.84% Ni) alloys at a pressure of 100 atm and temperatures of 200-600° is given by the equation $v = K \exp(-E/RT)$. For Fe-Cr alloys E is independent of the composition and has a value of 8 to 9,000 cal per gram-atom H_2 . For Fe-Ni alloys containing 1.29-20.05% Ni, E has the same value, i.e., it practically does not differ from the value of E for Fe-armco (9,300 cal); for alloys containing 73.86-90.76% Ni $E \approx 12,000$. For Fe-Cr alloys v is smallest at 19% Cr content. For Fe-Ni alloys v has a maximum at ~6% Ni and a minimum at ~74% Ni content.

Card 1/1

USSR/Medicine - Typhoid

Oct 53

"Microbiological Investigation of Typhoid Cultures,"
B. P. Pervushin, A. D. Shcherbakova, N. N.
Ushmoreva, Z. S. Sserina; Kuban' Med Inst;
Krasnodar Inst of Epidemiol and Microbiol

Zhur Mikro Epid i Immun, No 10, p 87

Strains of typhoid bacilli isolated in 1947-9
had a high content of Vi-antigen. This antigen was
preserved for a long time in standard cultures
kept in storage. It proved possible to maintain

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a high Vi-antigen content by selection and to
bring back to the V-state cultures which had
acquired characteristics of W-strains. The
predominant phage types were D, F, and their
sub-types. The phage type may change not only
on nutrient media, but also in the organism.
For that reason one must be careful in phage
typing for epidemiological purposes.

RE: S. H. E. R. K. E. A. V.
A. H. H. 7 - E. G. W. (H. H. 7)

Subject : *See above - H. H. 7, H. H. 8, H. H. 9*
Title : *See above - H. H. 7, H. H. 8, H. H. 9*
Date : *See above - H. H. 7, H. H. 8, H. H. 9*
Place : *See above - H. H. 7, H. H. 8, H. H. 9*
Reference : *See above - H. H. 7, H. H. 8, H. H. 9*

Page 1/1

DUBOVYY, M.I., kand.med.nauk; LITVIN, I.I., dotsent; SHTABSKIY, B.M.,
assistant; SHCHERBAKOVA, A.K., kand.med.nauk

Chemical dermatitis in coal miners. Vest.derm. i ven. 34
no.2:43-46 F '60. (MIRA 13:12)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. - prof.
A.A.Shteyn) i kafedry obshchey gigiyeny (zav. - prof.V.Z.
Martynyuk) L'vovskogo gosudarstvennogo meditsinskogo instituta
(direktor - prof.L.N.Kuzmenko).
(OCCUPATIONAL DERMATITIS)
(MINING)

KOZLOVA, V.M.; SHCHERBAKOVA, A.K.

Helminths of carp and predatory fishes in the Astrakhan Preserve.
Uch.zap.GGPI no.27:111-120 '60. (MIRA 15:3)
(Astrakhan Preserve—Parasites—Fishes)
(Worms, Intestinal and parasitic)

BABAYEV, B.; SHCHERBAKOVA, A.I.

Control of bothriocephaliasis in *Ctenopharyngodon idella*. Izv.
AN Turk. SSR. Ser. biol. nauk no.4:86-87 '63. (MIRA 16:9)

1. Institut zoologii i parazitologii AN Turkmenskoy SSR i
Turkmenskoye respublikanskoye veterinarnoye upravleniye.
(Turkmenistan--Parasites--*Ctenopharyngodon*)
(Turkmenistan--Tapeworms)

DUBOVYY, M.I., assistant; SHCHERBAKOVA, A.K., assistant; POVKH, B.V.;
GZHEGOTSKIY, M.I.

Therapeutic and preventive measures in reducing suppurative
diseases among miners of the Lvov coal basin. Vest.derm.i ven.
no.9:51-53 '61. (MIRA 15:5)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. - prof.
A.A. Shteyn) L'vovskogo meditsinskogo instituta (dir. - prof.
L.N. Kuzmenko). 2. Zam. glavnogo vracha mediko-sanitarnoy chasti
(for Povkh). 3. Glavnyy vrach sanitarno-epidemiologicheskoy
stantsii Chervonograda (for Gzhegotskiy).
(LVOV-VOLYN' BASIN--COAL MINERS--DISEASES AND HYGIENE)

II, M., Professor: R. Sh. Is. F.; AMCHER. 1974, 1975.

Diagnostic errors in diphtheria of the pharynx. Early letter.
med. inst. 50:197-199 '61. (Minsk 1961)

1. Iz kafedry detskikh bolezney (Minsk) (Minsk), Assistant
L.V. Vayl') Tsentral'nogo gosudarstvennogo meditsinskogo instituta
imeni Abum. Ito-Sint.

BORMOTOV, V.Ye.; ZAGREKOVA, V.N.; SHCHERBAKOVA, A.M.

Development of tetraploid forms of sugar beets. Report No.1:
Preparation and selection of C_0 polyploids during the first
year of vegetation. Biul. Inst. biol. AN BSSR no.6:233-238
161.

(MIRA 15:3)

(SUGAR BEET BREEDING)

PAVLOV, A.I.; TARASEVICH, Ye.I.; ANOKHINA, V.S.; SHCHERBAKOVA, A.M.

Significance of the introduction time of maternal pollen into the pollinating mixture for the results of remote hybridization. Bot.; issl. Bel. otd. VBO
no. 102-109 '64.
(MIRA 13:7)

SHAFRANOVSKIY, A.K., kand.tekhn.nauk; SHCHERBAKOVA, A.P., inzh.

Technical and economic effectiveness of track tamping and alignment
machinery, taking performance quality into consideration. Vest. TSNII
MPS 19 no.8:43-46 '60. (MIRA 13:12)
(Railroads--Equipment and supplies)

ZOLOTAREVA, A.I.; FOMENKO, Z.F.; SHCHERBAKOVA, A.E.

Composition of water soluble salts in rocks of the Dolina oil
field and its effect on the parameters of clay muds. Trudy
UkrNIGRI no.7:126-130 '63.

(MIRA 19:1)

1 3000000 INT(m)/T/INT(w)/INT(c) DT1 INT(c) ID
 ACC NO: A50017520 (N) SOURCE CODE: UR/0143/66/000/001/0149/0150

AUTHOR: Ganchev, V. M.; Vozoboynikova, N. A.; Shcherbakova, A. P.

ORG: Chelyabinsk Polytechnic Institute (Chelyabinskii politekhnicheskii institut)

TITLE: The effect of intermediate structures on the properties of structural steels

SOURCE: IZVZ. Chernaya metallurgiya, no. 1, 1966, 149-153

TOPIC TAGS: alloy steel, bainite, metal heat treatment, metallographic examination, impact strength

ABSTRACT: The kinetics of austenite decomposition in two medium alloyed Cr-Ni-Mo steels and on the mechanical properties of their intermediate transformation products at room temperature and below was studied. Critical points were determined on a differential optical dilatometer for temperature changes of 190 deg/hr. Isothermal transformation diagrams were given and the austenitic stability was measured (% austenite) for different temperature regions, the maximum austenitic stability being obtained in the higher alloyed steel (B) at 450-550°C. Microstructures for isothermal transformation at different temperatures and for quenched and tempered steel were compared: at the lower part of the intermediate region the structure was needle-like, whereas at the higher part the needles were thicker. Tensile and impact properties of the above structures were tabulated. At room temperature, the lowest properties were obtained for

UDC: 669.14.018.27:620.17

Card 1/2

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ACC NR: AP6017523

steel (A) transformed isothermally at 450°C. The best properties (high strength and plasticity) were obtained for the ordinary quench and temper treatment. The % of austenite transformed dropped from 100 at 350°C to 90 at 450°C for steel (A) and from 95 at 300°C to 15 at 425°C for steel (B). The effects of isothermal transformation in the intermediate region on the impact strength and on the fracture characteristics at different testing temperatures were determined. For steel (A) with 100% austenite transformed, the fracture appearance at room temperature was brittle and at lower temperatures the impact strength decreased. Steel (B) exhibited better impact strengths at the lower temperatures, especially for the quenched and tempered structure. In all cases, the intermediate isothermal structures lowered the physical properties, all the more sharply for the lower temperatures. The negative influence of the intermediate structures depended on the alloy content, the amount and characteristics of the intermediate structure and the test temperature. Orig. art. has: 4 figures, 2 tables.

SUB CODE: 11/

SUBM DATE: 19Jan63/

ORIG REF: 004

Card 2/2

SHCHERBOVA, A. D.

44 5/110 6493
 Kolbasovskiy, Yu. A., Kustanovich, I. M., Polak, L. S.,
 Shcherbova, A. D.

307/20-123-1-12/64

TITLE: Electron Paramagnetic Resonance Spectra for Some Catalysts of
 Catalyst - Hydrocarbon Systems and the Action of Y-Rays on These

PERIODICAL: Doklady Akademi nauk SSSR, 1959, Vol. 129, Pt. 1, pp 145-148
 (USSR)

ABSTRACT: The study of the electron paramagnetic resonance (epm) spectra
 of catalysts and catalyst - hydrocarbon systems represents a
 new method of investigating catalysts as well as descriptive
 and catalytic processes. The authors used typical oxide catalysts
 such as Al_2O_3 , Fe_2O_3 , Cr_2O_3 , V_2O_5 , CoO , NiO , MnO , ZnO , CuO ,
 etc. are applied for cracking, dehydrogenation, hydrogenation,
 isomerization, etc. processes (aluminum oxide, alumina
 silicate, aluminum oxide-silica, $\text{CoO} \cdot \text{Al}_2\text{O}_3 \cdot \text{SiO}_2$,
 $\text{Cr}_2\text{O}_3 \cdot \text{Al}_2\text{O}_3$ activated by K_2O and molybdenum sulfide). The
 spectra of the catalysts investigated are discussed (Fig. 1-4).
 The final results are summarized independent of the action
 of the adsorption of hydrocarbons on Al_2O_3 and alumina silicate.

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Catalysts has but little effect on their epr-spectra. Irradiation
 produces marked changes in the epr-spectra of aluminum
 oxide, molybdenum oxide catalysts containing adsorbed hydro-
 carbons. The temperature dependence of the concentration of
 centers with unpaired electrons indicates the existence of active
 barriers. The majority of spectra investigated had no
 hyperfine structure, the only exception being the aluminum
 silicate cracking catalyst after adsorption of heptane and
 heptene and after irradiation. There are 4 figures and 3 Soviet
 references.

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TITLE:

γ -radiolysis of n-hexane in the presence of small admixtures of benzene

PERIODICAL: Neftekhimiya, v.1, no.5, 1961, 695-699

TEXT: The authors investigated the composition of the main products of radiolysis of hexane in the liquid phase at 20°C in the presence of small additions of benzene. Great care was taken to purify the hexane before radiolysis. It was washed with oleum, alkaline solution and water, dried with CaCl_2 , passed through silica gel and distilled. Benzene used was of cryoscopic grade and thiophane free. Solutions of benzene in hexane (10^{-4} to 10^{-1} mole/litre) were placed in special ampules. Before sealing, air was removed from the solutions by repeated freezing to -196°C and melting in high vacuum (5×10^{-3} mm Hg). After sealing, all ampules were irradiated simultaneously with γ -rays for 80 h using Co^{60} . Radiation dosage was 4×10^{15} eV/sec cm^3 . It is shown that yields of products resulting from the rupture of C-H bonds, X

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